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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/799,402	03/12/2004	Takuya Kosugi	80398P584	7336

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EXAMINER	
WANG, HARRIS C	

ART UNIT	PAPER NUMBER
2139	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/799,402	KOSUGI ET AL.	
	Examiner	Art Unit	
	Harris C. Wang	2139	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 March 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-17 are pending

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7, 10-17 rejected under 35 U.S.C. 102(e) as being anticipated by Unger (7020287).

Regarding Claims 1 and 10,

Unger teaches a method comprising:

accessing indexing data associated with a data unit previously stored within a storage device, the data unit including content in a scrambled format; *("Once the desired jump point has been identified using the table, the content index entry can be used to access the data/content store 22, Column 5, lines 8-10)*

using at least a portion of the indexing data, determining whether the content in the scrambled format is capable of being descrambled by a descrambler using a currently valid descrambling key; *("it is determined whether the key to be used to decrypt the first packet of the new sequence (i.e., the key that was just obtained from the table) has the opposite polarity as the last packet of the current sequence" Column 5, lines 30-33)*

retrieving the data unit; and forming a data stream for processing by the descrambler, the data stream including a trigger data sequence inserted prior to the data unit, the trigger data sequence to identify that the data unit is capable of being descrambled by the descrambler using an updated descrambling key differing from the currently valid descrambling key. *("It may now be appreciated that the key table permits content to be selected at random from the data store (in, e.g. "trick modes") and directly correlated to the appropriate key. Furthermore...keys can be built into ECM packets and then inserted into the new reconstituted stream so that the key is available to an unmodified decryption module of the system in sufficient time to effect encryption." Column 5, lines 46-53)*

Unger teaches that the method can be performed by a computer program product. *("A computer program device for executing the method is also disclosed" Column 2, lines 36-37)*

Regarding Claims 2 and 11,

Unger teaches the method of claim 1, wherein accessing of the indexing data comprises accessing keying material associated with the data unit from a table stored within the storage device. *("the keys in the table can be linked to the corresponding TSC bits to which they apply (and, hence, to the transport packets to which they apply)" Column 4, lines 18-20).*

Unger teaches that the method can be performed by a computer program product. *("A computer program device for executing the method is also disclosed" Column 2, lines 36-37)*

Regarding Claims 3 and 4,

Unger teaches the method of claim 2, wherein the determining whether the content in the scrambled format is capable of being descrambled by the descrambler using the currently valid descrambling key comprises comparing the keying material with the current valid descrambling key. *("it is determined whether the key to be used to decrypt the first packet of the new sequence (i.e., the key that was just obtained from the table) has the opposite polarity as the last packet of the current sequence" Column 5, lines 30-33)*

Regarding Claims 5 and 12,

Unger teaches the method of claim 1, wherein the data unit is non-sequential in time to a current data unit being descrambled by the descrambler using the currently valid descrambling key. *("the present invention recognizes that it is desirable to provide "trick mode" playback, i.e. to allow a viewer to fast forward through the content, pause, reverse, etc., ie., to play the transport stream at a rate or in a direction or even in a packet sequence other than envisioned for normal playback mode" Column 1, lines 57-63)*

Unger teaches that the method can be performed by a computer program product. *("A computer program device for executing the method is also disclosed" Column 2, lines 36-37)*

Regarding Claims 6, 7, 13-14

Unger teaches the method of claim 1, wherein the trigger data sequence includes keying material and a slot number. *(Figure 3. The Examiner interprets the slot number as "packet # or time increment," keying material as "even key" or "odd key," and command code as "PUSI")*

Unger teaches that the method can be performed by a computer program product. *("A computer program device for executing the method is also disclosed" Column 2, lines 36-37)*

Regarding Claim 15,

Unger teaches a digital device, comprising:

a storage device adapted to store content received from a transmission and metadata associated with the content, the content includes a video program in a scrambled format; *("Method and system for key insertion for stored encrypted content" Title)*

a descrambler adapted to descramble incoming content using a descrambling key stored in any one of a plurality of key slots accessible by the descrambler; *("the stream substitute ECM packets that are built on-the-fly using the appropriate keys in the table. This permits using an unmodified decoder module with embedded decryption downstream to process the content" Column 4, lines 55-59)*

and a host processor in communication with the storage device and the descrambler, the host processor to access the metadata data and to generate a trigger data sequence for insertion into a data stream prior to video program in response to

detection that the video program is capable of being descrambled only by an updated descrambling key being different than descrambling keys currently stored in the plurality of key slots. *("a playback device that includes a content store configured for holding encrypted content. The content includes a transport stream of content data packets, and some packets include keys. A processor accesses the store and is programmed to arrange the key in a key table and to link keys in the table with key changes in the transport stream, to facilitate subsequent decryption and playback of the content" Column 2, lines 39-47)*

Regarding Claims16-17,

Unger teaches the digital device of claim 15, wherein the trigger data sequence includes keying material associated with the video program and a slot number identifying which of the plurality of key slots the updated descrambling key is assigned. *(Figure 3. The Examiner interprets the slot number as "packet # or time increment," keying material as "even key" or "odd key," and command code as "PUSI")*

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Unger in view of Demas (7174085).

Regarding Claims 8 and 9,

Unger teaches the method of claim 1 further comprising:

retrieving the data stream by the descrambler; and in response to detection of the trigger data sequence, obtaining the updated descrambling key using information contained within the trigger data sequence.

wherein the obtaining of the updated descrambling key comprises using keying material contained in the trigger data sequence to recover a descrambling key pre-stored within a non-volatile memory accessible to the descrambler. *("It may now be appreciated that the key table permits content to be selected at random from the data store (in,*

e.g. "trick modes") and directly correlated to the appropriate key. Furthermore...keys can be built into ECM packets and then inserted into the new reconstituted stream so that the key is available to an unmodified decryption module of the system in sufficient time to effect encryption." Column 5, lines 46-53) The Examiner interprets the data stream as the reconstituted stream, detecting a trigger sequence to obtain the updated descrambling key as obtaining the keys built into the ECM packets.

However Unger does not explicitly teach first inputting the data stream into a playback buffer.

Demas teaches inputting a data stream into a playback buffer. *("In a typical PVR system, video is generally looped through a playback buffer (typically RAM) before it is sent to the MPEG decoder during any live decoding so that a pause can be seamless" Column 1, lines 35-40)*

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Unger to include a playback buffer to receive the data stream.

The motivation is that it is very common for trick play DVR systems to include a playback buffer to receive data input. In fact, Demas teaches that "In a typical PVR system, video is generally looped through a playback buffer." Unger teaches a personal video recording system, therefore one of ordinary skill would be able to add a playback buffer.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harris C. Wang whose telephone number is

5712701462. The examiner can normally be reached on M-F 8-5:30, Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, AYAZ R. SHEIKH can be reached on (571)272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HCW

TAGHI ARANI
PRIMARY EXAMINER

6/29/07